Doctor of Nursing Practice Project
Improving Urinary Tract Infection Treatment with Antibiotic Stewardship in Long Term Care

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Background

- Urinary tract infections (UTIs) lead to unnecessary antibiotic usage in long-term care facilities (Rousham et al., 2019)
- Antibiotics to treat UTIs are not always warranted and may lead to systemic complications (Rousham et al., 2019)
- At least 25% and up to 75% of antibiotics are not necessary (Salem-Schatz, et al., 2019)
- Medicare spends about $1.6 billion annually on medical costs related to UTIs (Sulham & Hammelman, 2021)

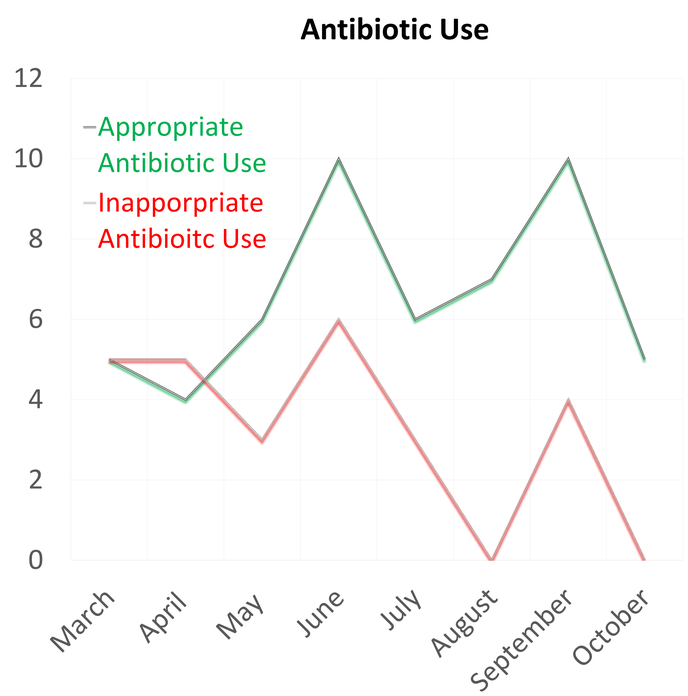
Purpose

To develop an antibiotic stewardship protocol within a small midwestern LTC facility to decrease unnecessary prescribing of antibiotics.

Method

- LTC facility assessment identified overuse of antibiotics
- Developed evidence-based, interprofessional antibiotic stewardship protocol for UTI management
- Protocol provided clear documentation of symptoms allowing antibiotics to be prescribed more effectively
- Obtained corporate and IRB approval
- Provided in-service education to nursing staff
- Delivered one-on-one provider education
- Implemented the antibiotic stewardship protocol
- Collected data for 4 months
  - Protocol starts
  - Protocol terminations
  - Antibiotics warranted & given
  - Antibiotics unwarranted, yet given
  - Documentation ceased without known cause

Results



Pre-implementation (March to June). Post-implementation (July to October).

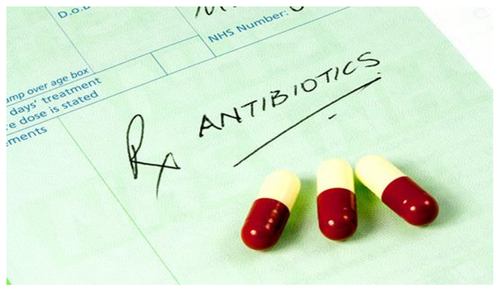
- Pre-implementation (March to June) antibiotics prescribed 19 times when urine bacteria did not meet standards for treatment
- Post-implementation (July to October), antibiotics prescribed 7 times when urine bacteria did not meet standards for treatment
- Protocol initiated 89 times
- Protocol effectively used 73 times
- Antibiotics effectively prescribed 28 times
- Effective use defined as only prescribing antibiotics when
  - Urine bacteria count >100,000/ml
  - Antibiotic termination when symptoms resolved, and
  - Documentation reflected protocol steps
- Post-implementation:
  - 15 instances of UTI symptoms resolved with simple interventions
  - 2 months had no inappropriate antibiotic use
  - Antibiotic use in the 4 mouths prior to implementation compared to the 4 months implemented 9 less antibiotics were given

Discussion

- Development, implementation, and education of an antibiotic stewardship protocol decreased unnecessary antibiotic prescribing
- Antibiotic rates of appropriate antibiotic use remained similar prior to and during implementation

Conclusion

- Facility stakeholders were pleased with the decrease in unnecessary antibiotic prescribing
- Providers confirmed the education was beneficial, were interested in the results, and are committed to protocol use



References

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